

**KAKATIYA UNIVERSITY**  
**FACULTY OF SCIENCE**

**B. Sc (Sericulture)**

**Semester – I**

**D SC Seri – I**

**General Sericulture and Moriculture**

Theory –	4 hours/week	4 credits	Theory { internal marks-20}
Practical –	3 hours/week	1 credit	Theory { external marks-80}
			Practical- External marks – 25

**Objectives**

1. To introduce the concepts of origin, growth and study of sericulture as science.
2. To understand about general aspects of moriculture and sericulture.
3. To understand the scientific approach of mulberry and package of practices.
4. Know the climatic conditions required for mulberry cultivation.

**UNIT – I**

Introduction to sericulture:- origin and history of sericulture, silk route; distribution of sericulture in world, components of sericulture (mulberry, rearing, reeling, grainage and weaving) end products of each components & their economic importance. Environmental impact on sericulture, eco-friendly activity of sericulture, employment generation in different components.

**UNIT – II**

Sericulture development & organization; economics on silk production, income generation through sericulture. Prospects and problems of sericulture, future strategies for sound sericulture. Importance of sericulture in rural development, role of women in sericulture, role of NGO's, Private Partners, State, Nation. International sericulture commission.

**UNIT – III**

Moriculture and its botanical aspects: History, origin, distribution and economical importance of the family; Moraceae, systematic position of the genus morus - its species and varieties, pure and cross breeds in India and abroad, optimum environment condition for growth and productivity Botanical description of mulberry, Anatomy of mulberry root, stem, leaf, flower and fruit. Mulberry production and establishment: propagation of mulberry - sexual and asexual methods, raising and maintenance of nurseries for saplings.

**UNIT – IV**

Package and practices: soils for mulberry cultivation, soil sampling and testing, problematic soils & their reclamation; plant nutrient management:- organic manures, inorganic fertilizer, bio fertilizers and irrigation management (sources, methods, impact on mulberry crop and schedules), mulching and intercultivation  
Establishment and maintenance of mulberry garden; package of practices for rainfed and irrigated garden, chawki gardens and weed management.  
Pruning of mulberry, harvesting, transportation and preservation of mulberry leaves: objectives and methods.

#### **REFERENCE BOOK:-**

1. Afifa, S Kamili and Amin Masood, M (2000) Principles of temperate sericulture, Kalyani Publishers, Ludhiana.
2. Bongale, UD (1986) Mulberry cultivation, Lectures on sericulture.
3. Dandin, S.B and Giridha, K ((2010) Handbook of sericulture technologies (4<sup>th</sup> revised Edition), Central Silk Board.
4. FAO Manuals – I mulberry cultivation, FAO Rome.
5. Ganga, G (2003) Comprehensive sericulture, Volume 1: Moriculture, Oxford & IBM Publishers Co. Pvt. Ltd, New Delhi.
6. Ganga., G., and J. Sulochana Chetty, J. (1995) An introduction to Sericulture (3<sup>rd</sup> reprint) Oxford and IBH Publishing Co Pvt. Ltd, New Delhi.
7. Hisao Aruga (1994) principles of sericulture, Oxford IBH publishing Co Pvt Ltd, New Delhi.
8. Rajat K Datla and Mahesh Nanavaty (2005) Global silk Industry: A complete source Book, Universal publishers Boia, Roton Florida, USA.
9. Rangaswamy, G. Narasimhanna, M.N, Kasiviswanathan, K., Satry, C.R and Jolly, M.S (1976) Sericulture manual, Mulberry cultivation, Food and Agricultural Services Bulletin 15/1 Food and Agriculture organization of the United Nations, Rome.
10. Rangaswami G Narasimhanna M.N, Kashiviswasnathan K Sastry, Sericulture manual – I Mulberry cultivation agriculture Service Bulletin, FAO Rome
11. Sandhya Rani S (1998) Sericulture and rural development, Discovery publishing House, New Delhi.

## General Sericulture & Moriculture

Practicals    D.SC – Seri – I

3 hours/week 1 credit

25 Marks

1. Sericulture Maps: Indicating mulberry and non mulberry belts in India and silk route
2. End products of mulberry, rearing, reeling, re reeling, grainage
3. Preparation of pie charts: 1) Different types of silk production in India  
2) Production of textile fibers.
4. Land area measurement – conversion and calculations.
5. Identification and study of sericulture products, cotton: types of silks and silk yarns, spun and noil fibers.
6. Taxonomic description of mulberry cultivators; Anatomy of root, stem, leaf, lamina, petiole, lenticles & trichomes; section cutting & preparation of permanent slides.
7. Raising of sapling – land & cutting preparation, planting & maintaining of nurseries.
8. Propagation methods with reference to grafts and layers.
9. Collection and testing of soil samples -  $P^H$ , soil horizon, water holding capacity, permanent wilting co-efficient.
10. Identification of manures & fertilizers and their calculation for a given area.
11. Identification and use of implements.

## AECC – I

### Fundamentals of Computer Science

**THEORY**

**2 hours/week**

**2 Credits**

**50 marks**

#### Objectives

1. To impart basic knowledge about environment and its allied problems.
2. Developing an attitude of concern for the environment.
3. To motive the students to participate in environment protection and its improvement.

#### UNIT – 1

What is a Computer; software and Hardware: Software application, Primary memory, Storage Devices.

#### UNIT – II

Working with computers: computer terminology; starting and stopping the computer; mouse usage.

#### UNIT – III

Computer tools & utilities; disk utility; files and directories; manipulating files and folders; working with windows environment

#### UNIT – IV

Computer network; LAN Internet; E-mail

#### UNIT – V

MS Word:- Introduction; Working with documents; formatting documents; creating tables, drawing tools, printing documents

#### UNIT – VI

MS Excel:- Introduction, working with spreadsheet, formation spreadsheet, creating chart

MS power point:- Introduction, opening new presentation, different presentation templates, setting backgrounds, setting presentation layout; creating presentation

#### REFERENCE BOOKS:-

1. Arora. S- Computer applications A textbook Dhanpal Rai & co (p) Ltd.
2. Anita Goel: Computer fundamentals.
3. B. Antonisamy, Prasanna S, S. Premkumar, Christopher S. Principles and practice of Bio Statistic, Elsevier India.
4. Jaypee brothers medical publishers: 2<sup>nd</sup> edition.
5. Rao, Bio statistic A manual of statistical for use in health nutrition and Anthropology.
6. V. Rajaraman, 6<sup>th</sup> edition Fundamentals of computer, Neharika Adabals.